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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,700	06/04/2001	Christopher W. Brumme	MS 167388.1	4955
27195	7590	11/29/2005	EXAMINER	
AMIN & TUROCY, LLP 24TH FLOOR, NATIONAL CITY CENTER 1900 EAST NINTH STREET CLEVELAND, OH 44114			KANG, INSUN	
			ART UNIT	PAPER NUMBER
			2193	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/873,700	BRUMME ET AL.	
	Examiner	Art Unit	
	Insun Kang	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2193

DETAILED ACTION

1. This action is in response to the amendment filed 10/20/2004.
2. As per applicant's request, claims 1, 2, 4-11, 13-20, 22, 25, 29-39, 41, 42, and 44-48 have been amended. Claims 1-48 are pending in the application.

Drawings

3. The drawings filed 10/20/2004 have been accepted.

Claim Objections

4. The objections to claims 3-6, 7, 9, 10, 14, 15, 18, 19, 30, 31, 32, 33, 36, 37, 38, 41, 42, 43 and 45 have been withdrawn due to the amendment to the claims.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 41-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 41-47, the phrase, "adapted to" is unclear because the claim limitations that employ the phrase, "adapted to" are limitations that do not distinguish over prior art. The limitations such as "adapted to determine" do not perform any actual functionality

Art Unit: 2193

but only require the ability to so perform. Causing an action or an intended action is different from actually performing an action. A “first component adapted to determine” does not necessarily mean that the determining step is actually performed. Therefore, the examiner interprets the limitations associated with the phrase, “adapted to” as: the recitations of a new intended use for a prior art.

Claim Rejections - 35 USC § 101

7. The rejection to claim 47 has been withdrawn due to the amendment to the claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Alpern (US Patent 6,651,248).

Per claim 1:

Alpern discloses:

- expressing an association between the declaration and an implementation (“efficient interface method dispatch, which includes an interface method table (IMT) for a given class of objects,” col. 3 lines 15-20)
- determining whether a source language association rule related to a declaration is different from a default association rule for a target runtime (“in certain instances the identified IMT entry may store a pointer to a conflict resolution routine. In such instance, the branch and link operation performed ... transfer control to the conflict resolution routine pointed to by the identified IMT entry,” col. Lines 7-12; “interface method signature dictionary...is defined that will store a plurality of entries each corresponding to a particular interface method signature of the interface methods declared and implemented by the objects of the program,” col. 8 lines 50-61)
- expressing an association between the declaration and the implementation according to an override association rule for the target runtime if the source language association rule is different from the default association rule for the target runtime (i.e.” in the event that the set S includes only a single interface method, the IMT entry stores a pointer to the implementation of the single interface method in the set S,” col. 9 lines 20-30; “The conflict resolution routine pointer to by a given IMT array entry is used to identify ...the location of the particular interface method...for each virtual method,” col. 8 lines 13-30)
- expressing an association between the declaration and the implementation according to the default association rule if the source language association rule is

Art Unit: 2193

the same as the default association rule for the target runtime (“a method invocation routine performs... ID value assigned to the signature of the interface method to be invoked,” col. 8 lines 1-7)

as claimed.

Per claim 2:

The rejection of claim 1 is incorporated, and further, Alpern teaches:

- expressing an explicit association between the declaration and the implementation (“The VMT contains entries for all virtual methods, implemented by objects of the given class,” col. 6 lines 39-64) as claimed.

Per claim 3:

The rejection of claim 2 is incorporated, and further, Alpern teaches creating an association between a class, a code body associated with the implementation and the declaration (i.e. “The VMT for a given class comprises a table of entries each containing a pointer to an implementation of a virtual method implemented by objects of the given class,” col. 6 lines 39-46) as claimed.

Per claim 4:

The rejection of claim 3 is incorporated, and further, Alpern teaches

- creating an entry in an override association table having entries for the class, the code body and the declaration (“The VMT for a given class comprises a table of entries each

Art Unit: 2193

containing a pointer to an implementation of a virtual method implemented by objects of the given class,” col. 6 lines 39-46) as claimed.

Per claim 5:

The rejection of claim 1 is incorporated, and further Alpern teaches:

-a method declaration signature, the implementation comprises an implementation signature, the default association rule for a target runtime comprises signature matching, and wherein expressing the association between the declaration and the implementation according to the override association rule for the target runtime if the source language association rule is different from the default association rule for the target runtime comprises expressing the association between the method declaration signature and the implementation signature if the source language association rule is different from signature matching (i.e.” in the event that the set S includes only a single interface method, the IMT entry stores a pointer to the implementation of the single interface method in the set S,” col. 9 lines 20-30; “The conflict resolution routine pointer to by a given IMT array entry is used to identify ...the location of the particular interface method...for each virtual method,” col. 8 lines 13-30).

Per claim 6:

The rejection of claim 5 is incorporated, and further Alpern teaches:

-creating the association between a class, a code body associated with the implementation signature, and the method declaration signature matching (“The VMT

Art Unit: 2193

contains entries for all virtual methods, implemented by objects of the given class,” col. 6 lines 39-64).

Per claim 7:

The rejection of claim 6 is incorporated, and further Alpern teaches:

-creating an entry in an override association table having entries for the class, the code body associated with the implementation signature, and the method declaration signature (“The conflict resolution routine pointer to by a given IMT array entry is used to identify ...the location of the particular interface method...for each virtual method,” col. 8 lines 13-30).

Per claim 8:

The rejection of claim 5 is incorporated, and further Alpern teaches:

-the method declaration signature matches a first implementation signature associated with a first implementation in the class and a second implementation signature associated with a second implementation in the class, and wherein expressing the association between the method declaration signature and the implementation signature according comprises expressing an explicit association between the method declaration signature and one of the first and second implementation signatures (i.e. col. 8 lines 13-30).

Per claim 9:

The rejection of claim 8 is incorporated, and further Alpern teaches:

Art Unit: 2193

-creating the association between a class, a code body associated with one of the first and second implementations, and the method declaration signature (i.e. col. 6 lines 39-64).

Per claim 10:

The rejection of claim 9 is incorporated, and further Alpern teaches:

-creating an entry in an override association table having entries for the class, the code body associated one of the first and second implementations, and the method declaration signature (i.e. col. 8 lines 13-30).

Per claim 11:

The rejection of claim 8 is incorporated, and further Alpern teaches:

-selecting one of the first and second implementations for association with the method declaration signature according to the source language association rule(i.e. col. 9 lines 20-30).

Per claims 12-15:

These claims are another versions of the claimed method discussed in claims 1-4, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth the above.

Per claim 16:

Art Unit: 2193

- interpreting an association between a declaration and an implementation in a target runtime system (“efficient interface method dispatch, which includes an interface method table (IMT) for a given class of objects,” col. 3 lines 15-20)
- determining whether the association comprises the override association (“in certain instances the identified IMT entry may store a pointer to a conflict resolution routine. In such instance, the branch and link operation performed ... transfer control to the conflict resolution routine pointed to by the identified IMT entry,” col. Lines 7-12; “interface method signature dictionary...is defined that will store a plurality of entries each corresponding to a particular interface method signature of the interface methods declared and implemented by the objects of the program,” col. 8 lines 50-61)
- interpreting the association between the declaration and the implementation according to the override association rule for the target runtime if the association comprises an override association(“The conflict resolution routine pointer to by a given IMT array entry is used to identify ...the location of the particular interface method...for each virtual method,” col. 8 lines 13-30)
- interpreting the association between the declaration and the implementation according to a default association rule for the target runtime if the association does not comprise an override association(“a method invocation routine performs...ID value assigned to the signature of the interface method to be invoked,” col. 8 lines 1-7)

as claimed.

Per claim 17:

The rejection of claim 16 is incorporated, and further, Alpern teaches the implementation is related to a class, and wherein determining whether the association comprises the override association comprises determining whether a metadata component comprises an explicit association between the declaration and the implementation ("The VMT contains entries for all virtual methods, implemented by objects of the given class," col. 6 lines 39-64) as claimed.

Per claim 18:

The rejection of claim 17 is incorporated, and further, Alpern teaches - determining whether the metadata component comprises an association between the class, a code body associated with the implementation, and the declaration ("The VMT for a given class comprises a table of entries each containing a pointer to an implementation of a virtual method implemented by objects of the given class," col. 6 lines 39-46) as claimed.

Per claim 19:

The rejection of claim 18 is incorporated, and further, Alpern teaches - determining whether the metadata component comprises an entry in an override association table having entries for the class, the code body, and the declaration ("The VMT for a given class comprises a table of entries each containing a pointer to an

Art Unit: 2193

implementation of a virtual method implemented by objects of the given class,” col. 6 lines 39-46) as claimed.

Per claim 20:

The rejection of claim 19 is incorporated, and further, Alpern teaches associating the code body with the declaration in the runtime system according to the override association table (“The VMT for a given class comprises a table of entries each containing a pointer to an implementation of a virtual method implemented by objects of the given class,” col. 6 lines 39-46) as claimed.

Per claim 21:

The rejection of claim 20 is incorporated, and further, Alpern teaches providing the association between the declaration and the implementation to a JIT compiler via a layout component (col. 6 lines 10-44; Fig 7B) as claimed.

Per claims 22 and 23:

These claims are another versions of the claimed method discussed in claims 20 and 21, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth the above.

Per claims 24-27:

Art Unit: 2193

These claims are another versions of the claimed method discussed in claims 16, 20 and 21, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth the above.

Per claims 28-33, they are the computer-readable medium versions of claims 1-8, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-8 above.

Per claim 34, it is the computer-readable medium version of claim 1, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 1 above.

Per claims 35-39, they are the computer-readable medium versions of claims 16-20, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 16-20 above.

Per claim 40, it is the computer-readable medium version of claim 24, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 24 above.

Per claims 41-43, they are the system versions of claims 1, 3 and 4, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1, 3 and 4 above.

Art Unit: 2193

Per claim 44, it is the system version of claim 12, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 12 above.

Per claim 45, it is the system version of claim 16, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 16 above.

Per claim 46, it is the system version of claim 26, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 262 above.

Per claim 47:

Alpern discloses:

-an association expression system for expressing an association between a source language declaration and an implementation in a language neutral fashion ("The dynamic loading and linking process creates and lays out Java objects according to a predetermined object model... this object model supports dynamic linking through a virtual method dispatch mechanism that includes a virtual method table...for a given class of objects...each containing a pointer to an implementation of a virtual method implemented by objects of the given class," col. 6 lines 32-46)

-a first component adapted to determine whether a source language association rule related to the source language declaration is different from a default association rule for a target runtime("in certain instances the identified IMT entry may store a pointer to a conflict resolution routine. In such instance, the branch and link operation performed ... transfer control to the conflict resolution routine pointed to by the identified IMT entry,"

col. Lines 7-12; "interface method signature dictionary...is defined that will store a plurality of entries each corresponding to a particular interface method signature of the interface methods declared and implemented by the objects of the program," col. 8 lines 50-61)

-an association expression component adapted to express the association between the source language declaration and the implementation according to an override association rule for the target runtime if the source language association rule is different from the default association rule for the target runtime ("The conflict resolution routine pointer to by a given IMT array entry is used to identify ...the location of the particular interface method...for each virtual method," col. 8 lines 13-30)

- express the association between the declaration and the implementation according to the default association rule if the source language association rule is the same as the default association rule for the target runtime ("a method invocation routine performs...ID value assigned to the signature of the interface method to be invoked," col. 8 lines 1-7) as claimed.

Per claim 48, this claim is another version of the claimed method discussed in claim 1, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth the above.

Response to Amendment

10. The amendments to the claims filed on 10/20/2004 do not comply with the requirements of 37 CFR 1.121(c) because: The abstract filed 10/20/2004 is not on a separate sheet. A replacement abstract on a separate sheet is required (37 CFR 1.72).

Per claim 7, '3' is deleted in line 1, however, '4' was previously presented. To expedite the prosecution, the examiner further examined the application. Clarification is requested.

Response to Arguments

11. Applicant's arguments filed 10/20/2004 have been fully considered but they are not persuasive.

The Applicant states that the "override association rule allows an association to be expressed or interpreted in a language neutral fashion."

In response to applicant's arguments, the recitation "language neutral fashion" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Further, the claims do not recite how the target runtime and the override association rule are related with the "language neutral fashion" and how the override association rule is different from the existing override association rule such as a conflict resolution routine for multiple interface methods. If applicant means anything more, this must be brought out in the claims to further clarify the invention.

Art Unit: 2193

Therefore, Alpern discloses the limitations in the claims. Accordingly, the rejections to the claims have been maintained.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The examiner can normally be reached on M-F 7:30-4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 571-272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

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